



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,881	03/30/2004	Michail Tsatsanis	59028-8003.US01	5755
22918	7590	05/14/2007		
PERKINS COIE LLP P.O. BOX 2168 MENLO PARK, CA 94026			EXAMINER TRAN, KHAI	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 05/14/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

5

<b>Office Action Summary</b>	<b>Application No.</b> 10/813,881	<b>Applicant(s)</b> TSATSANIS, MICHAEL	
	<b>Examiner</b> KHAI TRAN	<b>Art Unit</b> 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 and 15-28 is/are allowed.
- 6) ☒ Claim(s) 10 is/are rejected.
- 7) ☐ Claim(s) 11-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/30/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 10 is rejected under 35 U.S.C. 102(e) as being anticipated by Duvaut et al (US 2005/0152442 A1).

Regarding claim 10, Duvaut et al disclose a communication system comprising: a plurality of modems simultaneously communicating over a plurality of twisted pair connections (see Figure 1); and a controller for adjusting frequency bandwidths of upstream and downstream communications to reduce NEXT interference for each modem, wherein a process for adjusting the bandwidths of the upstream and downstream communications is repeated until a desired bit rate and desired signal to noise ratio margin are obtained (see [0023] to [0027], wherein it is noted that a measurement of line attenuation versus frequency and/or crosstalk versus frequency for some or all of the transmission bandwidth; At step 204, upstream and/or downstream PSD masks that optimizes the performance of the transmitted/received signal is configured based on the line attenuation/crosstalk characteristics, as well as other applicable constraints, such as a fixed total signal power or the requirement that

Art Unit: 2611

the signal resulting from the application of the PSD mask be spectrally compatible.

The resulting optimized upstream and/or downstream PSD masks may be checked for spectral compatibility at step 206. Should the PSD masks be determined to be spectrally incompatible, the PSD masks may be further refined pursuant to the spectral compatibility constraint by reapplying the same or different water-filling algorithm at step 208. Thus, the process 200 may employ an iterative approach to repeatedly adjust the PSD masks to ensure spectral compatibility.

***Allowable Subject Matter***

3. Claims 1-9, and 15-28 are allowed.
4. Claims 11-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. The following is a statement of reasons for the indication of allowable subject matter: Duvaut et al fail to disclose or suggest a communication system comprising: bitloading the initial power spectral density mask for a desired data rate and a desired signal to noise ratio margin; measuring and comparing an actual signal to noise ratio margin to the desired signal to noise ratio margin; and adjusting the frequency bandwidth allocated in the initial power spectral density mask to minimize NEXT interference if the actual signal to noise ratio margin is not within an acceptable tolerance of the desired signal to noise ratio margin.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rippin et al (U.S. Pat. 6,741,604) disclose ADSL transmission in the presence of low-frequency network service.

Ginis et al (U.S. Pat. 7,158,563) disclose dynamic digital communication system control.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAI TRAN whose telephone number is (571) 272-3019. The examiner can normally be reached on 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAY PATEL can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/813,881  
Art Unit: 2611

Page 5

A handwritten signature in black ink, appearing to read 'Khai Tran', written in a cursive style.

KHAI TRAN  
Primary Examiner  
Art Unit 2611

*KT*  
*May 9, 2007*